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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/622,584

07/21/2003

Tatsuya Arao

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26171

7590

09/22/2004

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EXAMINER

RICHARDS, N DREW

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,584	Applicant(s) ARAO ET AL.	
	Examiner N. Drew Richards	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 19-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 19-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/873334.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/21/03, 4/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 and 19-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 line 10, claim 19 lines 13 and 16, claim 27 line 12, and claim 35 line 13 recite "a second conductive layer." In each of these claims a second conductive layer has previously been claimed. Thus, it is indefinite as to whether the lines cited are claiming another different "second conductive layer" or whether they are claiming the same "second conductive layer" previously claimed.

Claim 1 line 12 and claim 19 line 18 recite "a first conductive layer." In each claim a first conductive layer has previously been claimed. Thus, it is indefinite as to whether the lines cited are claiming another different "first conductive layer" or whether they are claiming the same "first conductive layer" previously claimed.

Claim 1 line 16, claim 19 line 22, claim 27 line 18, and claim 35 line 16 recite "an impurity." In each of these claims an impurity has previously been claimed. Thus, it is indefinite as to whether the lines cited are claiming another different impurity or whether they are claiming the same impurity previously claimed.

The dependent claims are also indefinite as they contain all the limitations of the claims from which they depend.

3. Insofar as definite, the claims are rejected over prior art as follows.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 4-9, 19, 22-27, 30-35 and 38-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable

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over claim 9 of copending Application No. 10/105,282. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences between the claims are minor details and modification that would have been obvious to one of ordinary skill in the art at the time of the invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

With regard to claim 1 of the instant application, claim 9 of the copending application teaches forming a semiconductor layer on an insulating surface, forming a first electrode (first gate electrode) of a lamination of a first conductive layer (first conductive film) and a second conductive layer (second conductive film), forming a high concentration impurity region using the first electrode as a mask (self-aligned doping to form impurity region A), forming a second electrode (second gate electrode) and third electrode (second gate electrode) by etching the first conductive layer and second conductive layer (etching the first electrode and second electrode), and forming a low concentration impurity region using the second conductive layer as a mask (self-aligned doping to form impurity region B). Claim 9 of the copending application is silent as to the first, second, and third width of the first and second conductive layers, however, this is considered obvious as the first and second conductive layers are etched and would thus have different widths after each etching step. With regard to claim 4 of the instant application, claim 9 of the copending application is considered to teach the further etching steps recited as claim 9 etches each of the first and second conductive layers twice.

Claims 19, 27 and 35 of the instant application all recite various combinations of the etching and doping steps of claim 4 of the instant application (which includes all the steps of claim 1 from which it depends). Thus, they are obvious over claim 9 of the copending application in a manner similar to claim 4.

Claims 5, 6, 22, 23, 30, 31, 38 and 39 are considered obvious in view of claim 9 of the copending application. It is well known in the art to use TaN and W as conductive layers in the semiconductor art. They are commonly used as conductors because of their low resistivity and their resistance to diffusion into silicon. It would have been obvious to one of ordinary skill in the art to use Tan and W as the first and second conductive layers.

With regard to claims 7, 24, 32 and 40, it would have been obvious to one of ordinary skill in the art to use phosphorus as the impurity. Claim 9 of the copending application teaches using an n-type impurity but does not specifically claim using phosphorus. It is well known in the art to use phosphorus since there are a limited number of dopants that one could choose from and extensive processing conditions are known for phosphorus because of it's common use in the art.

With regard to claims 8, 9, 25, 26, 33, 34, 41 and 42, these claims are considered obvious. One of ordinary skill in the art would recognize that it would have been obvious to use the transistor formed in claim 9 of the copending application in an electro-luminescence display or in a video camera, digital camera, projector, goggle-type display, car navigation system, personal computer, player using recording medium, mobile computer, electronic book, or portable telephone. One of ordinary skill in the art

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would recognize the fact that thin film transistors such as that of claim 9 of the copending application, are commonly used in these products and are continually being developed for these products since they can be made small, thin, and on light, flexible substrates.

Conclusion

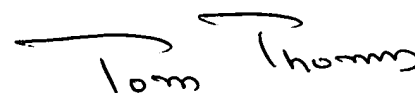
Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Drew Richards whose telephone number is (571) 272-1736. The examiner can normally be reached on Monday-Friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



NDR



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